

§572.121

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§572.121 General description.

(a) The Hybrid III type 6-year-old dummy is defined by drawings and specifications containing the following materials:

(1) Technical drawings and specifications package P/N 127-0000, the titles of which are listed in Table A;

(2) Procedures for Assembly, Disassembly, and Inspection (PADI) of the Hybrid III 6-year-old test dummy, Alpha version (August 1999).

TABLE A

Component assembly	Drawing number
Head assembly	127-1000
Neck assembly	127-1015
Upper torso assembly	127-2000
Lower torso assembly	127-3000
Leg assembly	127-4000
Arm assembly	127-5000

(b) Adjacent segments are joined in a manner such that except for contacts existing under static conditions, there is no contact between metallic elements throughout the range of motion or under simulated crash impact conditions.

(c) The structural properties of the dummy are such that the dummy must conform to this Subpart in every respect before use in any test similar to those specified in Standard 208, "Occupant Crash Protection", and Standard 213, "Child Restraint Systems".

§572.122 Head assembly and test procedure.

(a) The head assembly for this test consists of the complete head (drawing 127-1000), a six-axis neck transducer (drawing SA572-S11) or its structural replacement (drawing 78051-383X), a head to neck-to-pivot pin (drawing 78051-339), and 3 accelerometers (drawing SA572-S4).

(b) When the head assembly in paragraph (a) of this section is dropped from a height of 376.0 \pm 1.0 mm (14.8 \pm 0.04 in) in accordance with paragraph (c) of this section, the peak resultant acceleration at the location of the

49 CFR Ch. V (10-1-06 Edition)

accelerometers at the head CG may not be less than 245 G or more than 300 G. The resultant acceleration vs. time history curve shall be unimodal; oscillations occurring after the main pulse must be less than 10 percent of the peak resultant acceleration. The lateral acceleration shall not exceed 15 g's (zero to peak).

(c) *Head test procedure.* The test procedure for the head is as follows:

(1) Soak the head assembly in a controlled environment at any temperature between 18.9 and 25.6 °C (66 and 78 °F) and a relative humidity from 10 to 70 percent for at least four hours prior to a test.

(2) Prior to the test, clean the impact surface of the skin and the impact plate surface with isopropyl alcohol, trichloroethane, or an equivalent. The skin of the head must be clean and dry for testing.

(3) Suspend the head assembly as shown in Figure N1. The lowest point on the forehead must be 376.0 \pm 1.0 mm (14.8 \pm 0.04 in) from the impact surface and the head must be oriented to an incline of 62 \pm 1 deg. between the "D" plane as shown in Figure N1 and the plane of the impact surface. The 1.57 mm (0.062 in) diameter holes located on either side of the dummy's head shall be used to ensure that the head is level with respect to the impact surface.

(4) Drop the head assembly from the specified height by means that ensure a smooth, instant release onto a rigidly supported flat horizontal steel plate which is 50.8 mm (2 in) thick and 610 mm (24 in) square. The impact surface shall be clean, dry and have a micro finish of not less than 203.2. $\times 10^{-6}$ mm (8 micro inches) (RMS) and not more than 2032.0 $\times 10^{-6}$ mm (80 micro inches) (RMS).

(5) Allow at least 2 hours between successive tests on the same head.

§572.123 Neck assembly and test procedure.

(a) The neck assembly for the purposes of this test consists of the assembly of components shown in drawing 127-1015.

(b) When the head-neck assembly consisting of the head (drawing 127-1000), neck (drawing 127-1015), pivot pin (drawing 78051-339), bib simulator